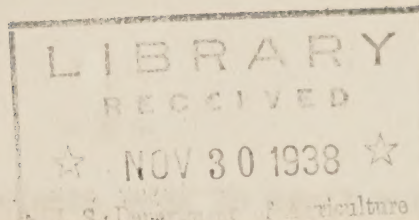


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THE HUMAN SIDE OF UNCLE SAM
(Nation's School of the Air)



THE U. S. BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

An interview between Mr. S. A. Rohwer, Assistant Chief, Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture, and Charles Herndon, student, Paul Junior High School, Washington, D. C. Broadcast Thursday, November 17, 1938, over Station WOL, Washington, D. C.

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CINCINNATI ANNOUNCER:

Now let's visit with Uncle Sam in Washington, D. C. To learn about Uncle Sam's insect fighters -- in the Bureau of Entomology and Plant Quarantine -- we take you now to the studios of Station WOL, in the Nation's Capital.

Frank Blair:

And here we are in the Nation's Capital, with Mr. S. A. Rohwer, Assistant Chief of the Bureau of Entomology and Plant Quarantine of the United States Department of Agriculture, and Charles Herndon, a student of Paul Junior High School, Washington, D. C. . . Mr. Rohwer and Charles have been talking about some mighty strange things -- a house fly that has more than five trillion descendants in four months -- and another insect with a wingspread of more than two feet. Mr. Rohwer, if you brought along any bugs like that, to set loose in this studio, I'm on my way -- out.

ROHWER:

Don't be alarmed, Mr. Blair. That insect lived millions of years ago, in the age when coal was being formed.

BLAIR:

Are you sure about that?

ROHWER:

Sure. That was --

"When you were a tadpole, and I was a fish,
"In the Paleozoic time."

HERNDON:

But that insect did have a wing spread of more than two feet. Mr. Rohwer, tell him about the dragon fly -- the one they found in Belgium.

ROHWER:

Well, this particular fossil had a wing spread of two feet, and five inches.

COMPTON:

Whew! If you'd run into a swarm of dragon flies like that one,

(over)

you'd think you had a flock of baby airplanes zooming over your head. Charles, it's a good thing we weren't living in those days.

HERNDON:

I'll say it is! But I'd like to see a dragon fly that big. And the cockroaches, too.

COMPTON:

Don't tell me they had cockroaches -- millions of years ago.

HERNDON:

Sure they did. Didn't they, Mr. Rohwer?

ROHWER:

Yes, they had some giant cockroaches. Cockroaches are one of the oldest of the insect families.

COMPTON:

Are there any places in the world not inhabited by insects?

ROHWER:

Few, if any. They can even breed in salt water. Some insects can live in ice.

HERNDON:

Mr. Rohwer, how many different kinds of insects are there, in the world?

ROHWER:

In the world?

HERNDON:

Yes sir.

ROHWER:

Well, I don't know. More than 700,000 have been described, and named.

HERNDON:

How many in the United States?

ROHWER:

In North America -- north of Mexico -- about 75,000. Several thousand of these are enemies of the farmer, because they ruin his wheat, and corn, and cotton -- and fruits and vegetables -- and shade trees, and flowers.

HERNDON:

How does the farmer ever raise anything -- with so many insects after his crops?

ROHWER:

Well, lucky for the farmer, not all these bugs attack the same crop

at the same time. By the way, do you know what we mean by "entomology"?

HERNDON:

Well, I know it's -- about insects.

ROHWER:

Yes, that's right. An entomologist is a person who studies insects, and their control.

HERNDON:

But I'd like to know how farmers keep insects from eating up all their crops.

ROHWER:

Well, one of our biggest jobs is to tell farmers how to control these pests. I don't suppose there's a Bureau -- in the Department of Agriculture -- that comes closer to every-day life, than the Bureau of Entomology and Plant Quarantine.

HERNDON:

But not my every-day life. I don't live on a farm.

ROHWER:

You don't?

HERNDON:

No sir.

ROHWER:

My boy, there isn't an hour in the day that you aren't affected by the work of the Bureau, directly or indirectly. You want proof?

HERNDON:

I'm -- from Missouri.

ROHWER:

All right. You sleep in a warm comfortable bed -- free from insects. You probably never saw a bedbug in your life.

HERNDON:

No sir. I never did.

ROHWER:

Lucky boy.

HERNDON:

But I have seen a bug called the silverfish -- and right here in Washington.

ROHWER:

Yes, they like our climate.

HERNDON:

Sometimes they're in the bath tub. How do they get in, anyway.

ROHWER:

Only by accident. They don't care a hoot for a bath. They may get inside the house on laundry -- or through cracks in the building.

HERNDON:

Do they do any damage?

ROHWER:

Yes, they're a great nuisance, because they eat books, wall paper, and starched lace curtains. But you can kill silverfish, with a poison bait. Now let's go on with our story. You're out of bed, you've had your bath, you're ready for breakfast.

HERNDON:

Yes sir.

ROHWER:

On the breakfast table -- Is there a bouquet of flowers?

HERNDON:

Sometimes there is. This morning it was a bowl of fruit -- apples.

ROHWER:

That's fine. But maybe you wouldn't have a centerpiece of apples, if entomologists hadn't worked out methods to control apple pests -- about 75 of them, including San Jose scale and the codling moth. Ever hear of the codling moth?

HERNDON:

No, I haven't.

ROHWER:

The codling moth is Apple Enemy Number One. It's found all over the United States, where apples grow. The moth lays its eggs in the young apple -- or even in the blossoms. After the eggs hatch, the worms burrow into the fruit. But entomologists have found a way to keep those worms out of the fruit.

HERNDON:

How do they do it?

ROHWER:

By using a spray. Of course it must cover every part of the apple.

HERNDON:

When the apple grows -- do you need more spray?

ROHWER:

Yes, you must keep the apple covered, as it grows. This may mean spraying the fruit several times before it's ripe. Then the spray is removed, and the apples are whole and perfect. Ready for your center piece, or for apple pie. Now what did you have for breakfast?

HERNDON:

To begin with, I had grapefruit.

ROHWER:

You didn't find a worm in your grapefruit.

HERNDON:

Of course not. I never have found a worm in grapefruit.

ROHWER:

Probably you never will. But you might have a different story to tell, if the Mediterranean fruit fly had persisted -- down in Florida.

HERNDON:

What kind of fly is that.

ROHWER:

A mean little two-winged pest, found in many parts of the world. It has caused untold damage to fruit. In 1929, it was discovered in Florida.

HERNDON:

How'd it get in to Florida?

ROHWER:

Nobody knows, for sure. But when it did get in, entomologists in Florida, and right here in Washington, got on the job of cracking down. The thing to do -- and do quickly -- was to locate and destroy every bit of infested fruit in the State of Florida.

HERNDON:

Why that's just like Doctor Mohler! And the way he cracked down on the foot-and-mouth disease!

ROHWER:

Yes, it's the same idea. But Doctor Mohler used guns with bullets, and entomologists used guns with spray. Now what else did you have for breakfast, besides grapefruit?

HERNDON:

I had cereal -- and eggs.

ROHWER:

Sounds like a good hearty breakfast. I know your cereal was good. No weevils in it, because we've learned how to make and package flour and breakfast foods and cereals so they will be free from weevils -- and a half dozen other cereal pests.

HERNDON:

I bet -- entomologists -- don't have anything to do with eggs.

ROHWER:

They don't?

HERNDON:

Well -- Do they?

ROHWER:

Certainly they do. Farmers have more and better eggs than they used to have -- because entomologists have found ways to keep lice off poultry. And mites, too.

HERNDON:

You win, Mr. Rohwer.

ROHWER:

Now what did you do after breakfast?

HERNDON:

I read the paper for a while -- and then I came down here. But you can't connect insects -- with newspapers.

ROHWER:

You sure about that?

HERNDON:

No sir.

ROHWER:

The paper was made from a tree, from wood -- from wood pulp.

HERNDON:

(Aw, I forgot that.)

ROHWER:

And one of the biggest jobs of the forester is to keep the insects away from his trees, so there will be enough wood for papers and books, and so on. Now after you read the paper --

HERNDON:

Then I put on my hat and coat and came down here.

ROHWER:

I see you are wearing a sweater.

HERNDON:

Say, do you know any way to keep moths from eating sweaters and bathing suits? I'd sure like to know!

ROHWER:

You come down to my office, and I'll give you a leaflet that tells how to control the clothes moth.

HERNDON:

Thanks.

ROHWER:

We have developed methods of controlling all sorts of household pests -- clothes moths, crickets, ants, cockroaches, bedbugs, termites, silverfish, house flies.

HERNDON:

Mr. Rohwer, is it true, what you said about one house fly -- in just four or five months -- having five trillion descendants?

ROHWER:

Why, it has been estimated that one house fly could be the great-great-great and so on grandmother of -- five trillion, 598 million, 720 thousand -- house flies.

HERNDON:

Do you believe that?

ROHWER:

I believe it is theoretically possible -- but it will never happen. Anytime Mother Nature lets the house flies get out of hand -- entomologists will pitch in and help her. I see you are wearing a cotton shirt.

HERNDON:

Yes sir.

ROHWER:

Your shirt is made of good cotton -- because we have found ways to control cotton pests, including the boll weevil, which got in to this country from Mexico.

HERNDON:

How do you control the boll weevil?

ROHWER:

With a poison dust, sprayed on by hand -- or by machines that run along the ground -- or by airplanes. Another pest of cotton is the pink boll worm, well established in Mexico. In fact, in most all cotton-producing parts of the world. In 1917 the pink boll worm was found in Texas and Louisiana -- in a section as large as the State of Connecticut.

HERNDON:

Did you get it out?

ROHWER:

Yes, by the simple method of starvation. All parts of the cotton plant -- in all the fields infested -- were picked and burned during fall and winter. Then no more cotton was grown in those fields the next season.

HERNDON:

I see. The pink boll worm just starved to death -- because it didn't have any cotton to live on.

ROHWER:

That's it. This is another case where a foreign plant pest was

eliminated. Now we've said a great deal about entomology. Do you know what we mean by plant quarantine?

HERNDON:

I guess it's -- I guess I better not guess!

ROHWER:

Ever been quarantined on account of measles?

HERNDON:

Yes sir, but don't tell me plants have measles!

ROHWER:

No, but they have plenty of other diseases -- and pests. All over the world, there are plant pests we want to keep out of this country. So, at every port in the United States -- San Francisco, New York City, New Orleans, Boston, the Mexican Border, the Canadian Border -- at all these places, and many more, Uncle Sam has plant quarantine officers. They help keep out foreign pests. If a new pest does get in -- like the pink boll worm -- we go after it might and main.

HERNDON:

How do plant quarantine officers keep out pests?

ROHWER:

That's a long story. For one thing, they inspect all plants, and other materials likely to carry pests. Along the Mexican Border, they even fumigate freight cars, so they won't bring in any boll worms. They inspect products that come in as cargo, as baggage -- in ship stores -- by boat -- by airplane.

HERNDON:

Airplane?

ROHWER:

Yes, every year plant quarantine officers inspect all foreign aircraft -- that means several thousand airplanes from foreign countries.

HERNDON:

That's news to me! Say, Mr. Rohwer, there's one good insect -- you didn't mention.

ROHWER:

The honey bee?

HERNDON:

That's what I was thinking of.

ROHWER:

Well now that's something else again. The story of bees is one of the most fascinating of all. Bees are important in three ways. They make honey, they make wax, and they pollinate plants. As a matter of fact,

nearly half of all the known insects are beneficial.

HERNDON:

Nearly half? What do they do for us?

ROHWER:

They destroy other insects -- which are pests. Ever hear of the ladybird beetle?

HERNDON:

You mean a little spotted beetle?

ROHWER:

Yes -- that's the one.

HERNDON:

When I was in the first grade, we used to sing a song about it.
"Ladybird, ladybird, fly away home."

ROHWER:

"Your house is on fire, and your children will burn."

HERNDON:

But I didn't know the ladybird was good for anything.

ROHWER:

It is an outstanding example of an insect that preys on other insects. Some years ago, the orange trees in California were attacked by a serious orchard pest -- the cottony cushion scale. We brought in a ladybird beetle, from Australia, and that beetle went right to work, to destroy the cottony cushion scale. But that is only one of many beneficial insects you will learn about -- when you study entomology.

HERNDON:

And I'd like to know more about those dragon flies -- with wings more than two feet wide!

ROHWER:

Well, that's part of entomology, too. Along with the codling moth, the Hessian fly, the pink boll worm, the Japanese beetle, the gypsy moth, the Mormon cricket, mosquitoes, ticks, and hundreds of other insects and plant diseases that make life interesting for Uncle Sam's workers -- in the Bureau of Entomology and Plant Quarantine.

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